ROADWAY SAFETY DATA - CAPABILITY ASSESSMENT

Webinar 2

May 10, 2011

▶ Learn more at:
safety.fhwa.dot.gov/rsdp

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Webinar 2 Agenda

- Welcome, Introductions and Webinar purpose

- Project Overview

- Division Office Role and Tools

- Assessment Framework and Process

- Pilot Results

- Feedback

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Overview of the VHB Team

- VHB
  - Ms. Kim Eccles
    - Technical Director keccles@vhb.com
  - Mr. Mike Sawyer
    - Task Order Principal Investigator msawyer@vhb.com
  - Ms. Nancy Lefler
    - Project Manager, TWG Coordinator nlefler@vhb.com

- *Supported by:*
  - UNC – Highway Safety Research Center
  - Data Nexus Inc.
  - NAVIGATS, Inc
  - Dr. Forrest Council

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Webinar Purpose

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway
Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Webinar Purpose

- Provide a project overview

- Update on project status

- Review Division Offices' role and available tools

- Introduce the assessment process

- Provide pilot state results

- Opportunities for feedback

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Project Overview

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Project Overview

- Brand and Logo

- Objectives

- Communication and Outreach

- Current Status

- Pilot States

- Schedule

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway
Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Brand and Logo

Partnership Components

- **Capability Assessment**

- Model Inventory of Roadway Elements (MIRE)

- Crash Data Improvement Program (CDIP)

- Roadway Data Improvement Program (RDIP)

- Highway Safety Manual (HSM)

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Capabilities Assessment - Objectives

- To create and carry out a process to assess each State's roadway data capabilities.

- To create a current baseline for each State and the Nation.

- To identify gaps and where States would like to be.

- To propose actions to move each State and the Nation forward in safety data analysis.

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Communication and Outreach

- Engaging:
  - Technical Working Groups
  - Pilot States
  - FHWA Division Offices
    - Project Summary Sheets
    - Talking Points
    - Website
  - NHTSA Regions
  - States
  - Communities of Interest

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Current Status

- Assessment process and framework approved

- Outreach initiatives ongoing

- Existing State resources collected

- Potential funding source summary complete

- Tested in two of four Pilot States

- Modifying process based upon the results

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Pilot States

- Montana – Rural (4/28)

- Minnesota - Locally-maintained (5/6)

- Massachusetts – Urban (5/18)

- North Carolina - State-maintained (June 2011)

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives
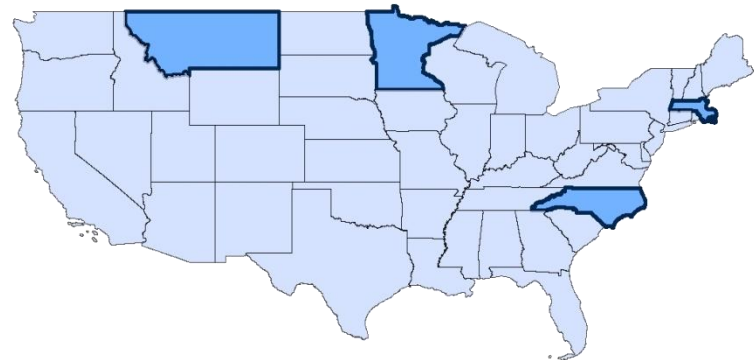
Remaining Schedule

- Twenty State Assessments

    – Mid-Point Report: Webinar 3 – August 30, 2011

- Remaining State Assessments

    – Final Report: Webinar 4 – July 10, 2012

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Questions?
Ways to Provide Additional Feedback

Dr. Heather Rothenberg	COTM	Heather.Rothenberg2@dot.gov
Ms. Nancy Lefler	TWG-C	nlefler@vhb.com
Mr. Mike Sawyer	TOPI	msawyer@vhb.com

Website: www.safety.fhwa.dot.gov/rsdp

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway
Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

DIVISION OFFICE ROLE AND USEFUL TOOLS

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Role of the Division Office

- Champion
- Advocate
- Supporter
- Mentor

Scheduling Assessment

1. FHWA/Project Team contacts FHWA Division Office
2. Division Office informs the State about the project, identifies key contacts, and provides contact information to project team
3. Project team contacts NHTSA Reps to inform them of project
4. Project team contacts State to schedule assessment
5. Project team provides the State questionnaire and works with State to determine the most appropriate persons to participate in Assessment
6. Confirm date of assessment
7. Work with States to answer any questions/concerns prior to Assessment

*Division Office and NHTSA Reps will be included on all key communications with the State.

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Tools - Website

Tools - Informational Handouts
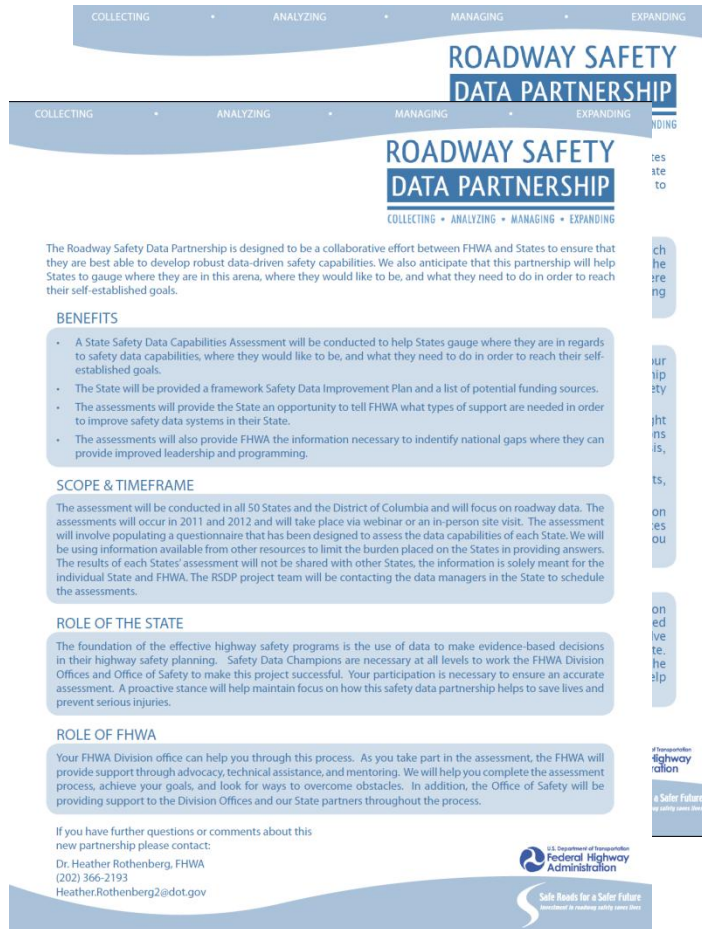
- Benefits
- Scope
- Timeframe
- Role of the State
- Role of the FHWA

Tools - Talking Points

Assessment Project Talking Points

Roadway Safety Data Partnership

1. Much of the effort in the past decades has concentrated on crash data; part of the picture. Roadway and traffic data are also essential. By incor data into network screening analysis, prioritization, and countermeasur can better identify safety problems and prescribe solutions to improve s efficient and effective use of safety resources.

2. The Roadway Safety Data Partnership is designed to be a collaborative e States to ensure that the States are best able to develop robust data-dr to create a national data capability baseline.

3. This partnership will help States to gauge where they are in this arena, and what they need to do in order to reach their self-established goals.

4. Using a consistent and systematic assessment process, the Partnership develop a customized assessment of their current roadway data capabil

5. States will also receive assistance throughout the process to identify act that will help them overcome gaps and integrate improvements into the

- The Partnership
- The process
- Project schedule
- How does it fit in?
- Use of results

ROADWAY SAFETY DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

FAQs

- What is the difference between this and a TRA?

  - More detailed assessment of roadway/traffic inventories

  - TRA is once every 5 years – RSDP Assessment will provide snap shot/baseline of Nation and States

- Will FHWA share the State's results?

  - No, the results are only for the States and FHWA. States can share their results with each other if they choose.

- Is FHWA going to judge the States?

  - No, assessment will help States determine where they are, and where <u>they want</u> to be.

Questions?
Ways to Provide Additional Feedback

Dr. Heather Rothenberg	COTM	Heather.Rothenberg2@dot.gov
Ms. Nancy Lefler	TWG-C	nlefler@vhb.com
Mr. Mike Sawyer	TOPI	msawyer@vhb.com

Website: www.safety.fhwa.dot.gov/rsdp

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

ASSESSMENT FRAMEWORK AND PROCESS

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Overview of Assessment Process

- Lead Assessor assigned to each State
- Defendable, repeatable, consistent process

Capability Maturity Model

- Systematic, objective assessment (not judgment)
- Five-point scale - less to more mature
- Each State will be placed in one of the five levels
- Provides FHWA quantitative results
- Provides State qualitative level and recommendations for moving to next level

	Level 1	Level 2	Level 3	Level 4	Level 5
Capability	Initial / Ad-hoc	Repeatable	Defined	Managed	Optimizing

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives
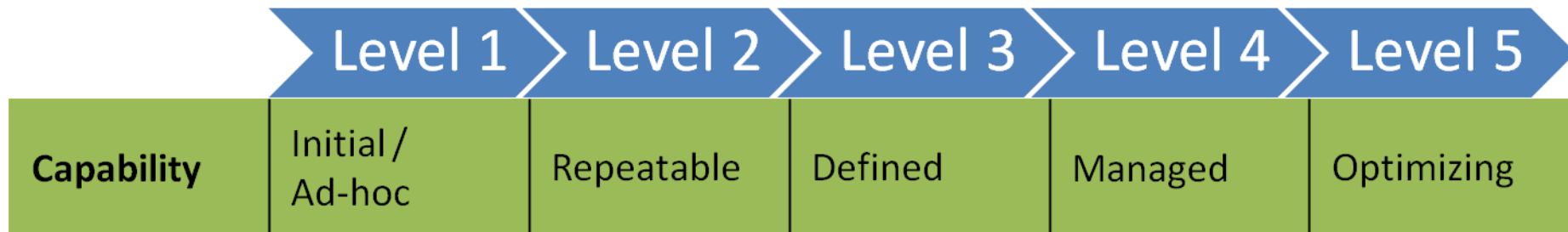
Assessment Framework

- Focus Areas

- Subareas/Elements
  - Each will have maturity level criteria
  - Key questions for Assessor to determine level
  - Modular – can stand alone or be combined

- Scoring to achieve overall capability level

- Additional qualitative questions
  - Desired level of the State
  - Key barriers
  - Resources/tools that would be beneficial to the State

Questionnaire

- Key questions developed to determine maturity level for each element

- Questionnaire will be web-based = "Assess-inar"

- Completed by project team based on resources prior to assessinar (reduce burden to the State)

- States review and provide feedback during assessinar

- Determine if site visit is needed

QUESTIONNAIRE

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Scoring Overview
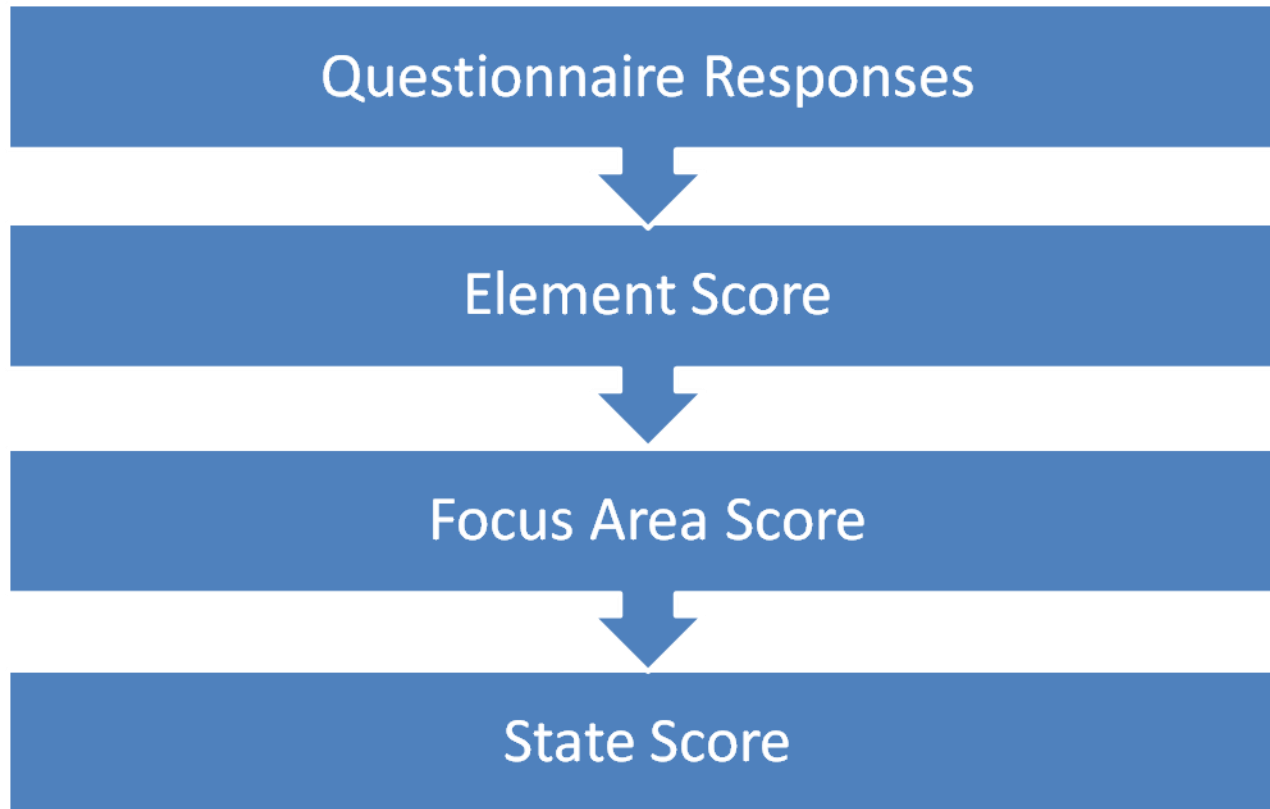
Focus Areas

- Area 1: Roadway Data Collection/Technical Standards

- Area 2: Data Analysis, Tools and Uses

- Area 3: Data Management and Governance

- Area 4: Data Interoperability and Expandability

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Key Area 1 Elements

- **Roadway Data Collection/ Technical Standards**
  - Completeness
  - Timeliness
  - Accuracy
  - Uniformity/Consistency

- Each element will look at data categories: roadway segments, intersections, interchanges, ramps, curves, and grades

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives
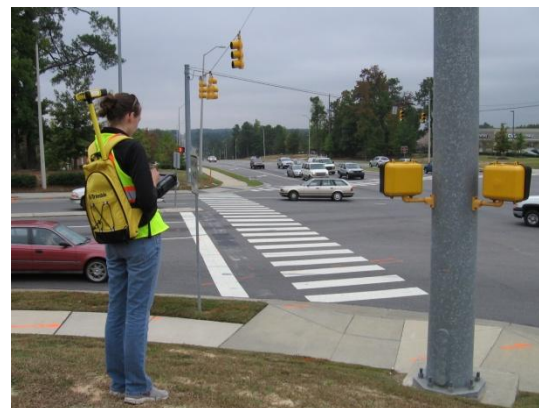
Key Area 2 Elements

- **Data Analysis, Tools and Uses**
  - Network Screening
    - Method
    - Data
    - Coverage
  - Diagnosis
  - Countermeasure Selection
  - Evaluation
    - Project
    - Program
  - Accessibility

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives
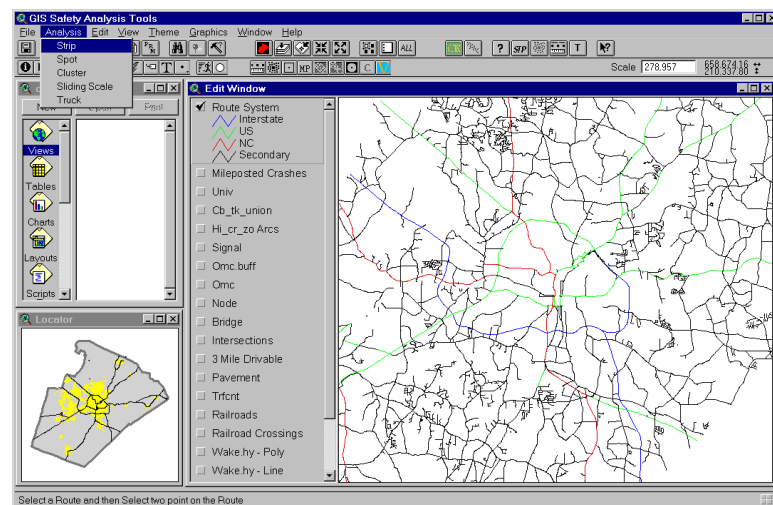
Key Area 3 Elements

- **Data Management and Governance**
  - People
  - Policies
  - Technology

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Key Area 4 Elements

- **Data Interoperability and Expandability**
  - Expandability
  - Linkage
  - Interoperability

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Element Maturity Level

Collection

Questions

Completeness Timeliness

Accuracy Uniformity

Analysis

Network Screening Diagnosis Countermeasure Selection

Evaluation Accessibility

Management

People Policy

Technology

Expansion

Interoperability Linkage Expandability

Apply Checkpoints and Dependencies

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING · ANALYZING · MANAGING · EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Area Maturity Level

Uniformity (XX%)			
Accuracy (XX%)			
Timeliness (XX%)			
Completeness (XX%)			

Data Collection (XX%)	Data Analysis (XX%)	Data Management (XX%)	Data Expandability (XX%)
		This State is a Level 5	
			This State is a Level 4
	This State is a Level 3		
This State is a Level 2			

Apply Checkpoints and Dependencies

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

State Data Capability Maturity Level
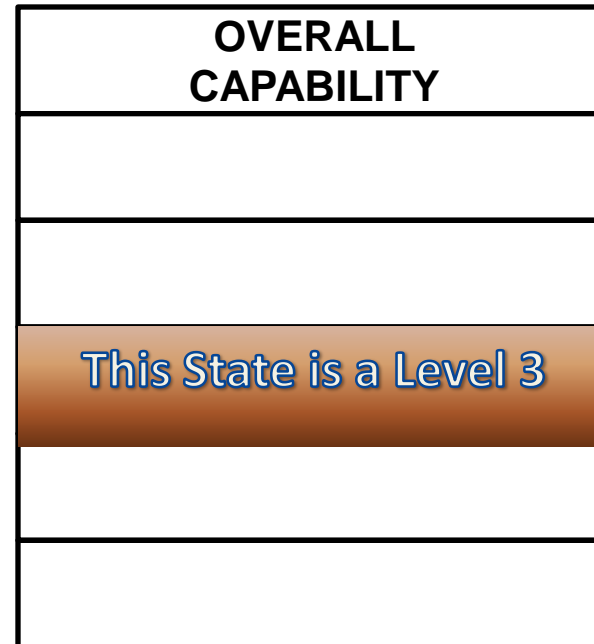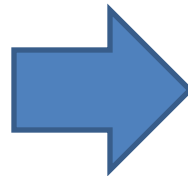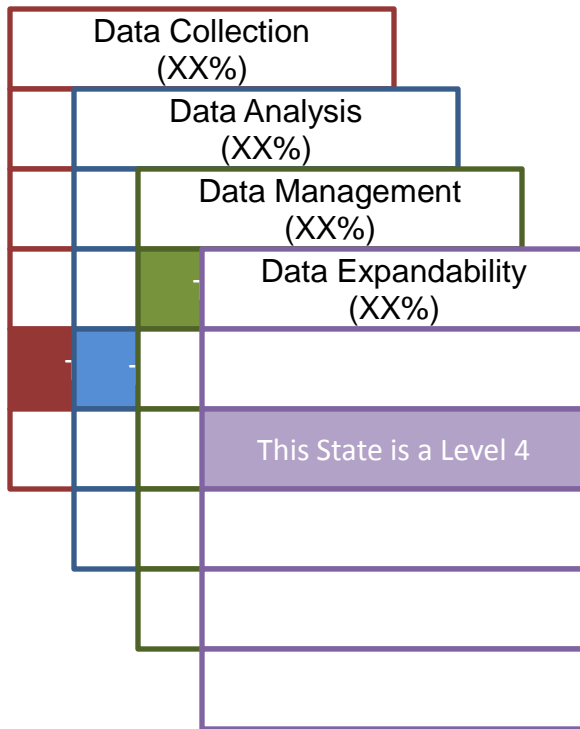
Consistency

- Consistent process and scoring criteria to assess each State…
  - Expert Lead Assessors
  - Questionnaire
  - Pilot State testing
  - Common thread – TOPI
    - Attends every assessment
    - Errors corrected immediately
    - Continuous improvement

Questions?
Ways to Provide Additional Feedback

Dr. Heather Rothenberg   COTM   Heather.Rothenberg2@dot.gov

Ms. Nancy Lefler   TWG-C   nlefler@vhb.com

Mr. Mike Sawyer   TOPI   msawyer@vhb.com

Website: www.safety.fhwa.dot.gov/rsdp

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway
Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

PILOT STATE RESULTS

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

General Comments

- The assessment tool will provide good baseline results for the nation and each state

- Some states may get frustrated, particularly if their data systems and programs are not robust

- We identified several actions to improve the assessment process and results

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Potential Opportunities

– Lead Time / Timing

– Length

– Format

– Broad questions vs specific systems

– Data Governance questions

– Defining Roadway Inventory Data

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway
Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Specific Recommendations

- Build plenty of lead time into the process
- Target a smaller audience with specific questions
- Utilize a story board approach
- Remove certain questions from the larger group to be answered one-on-one
- Identify a key IT Professional to assist in answering Data Governance questions
- Consider when to use face-to-face vs web-based meetings
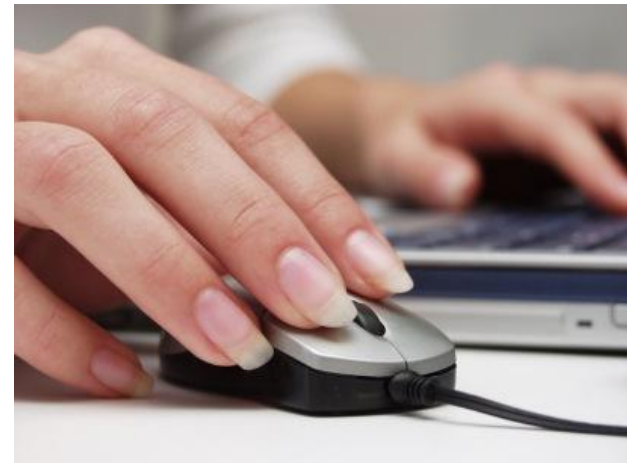- Allow additional time for state response if needed

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Questions?
Ways to Provide Additional Feedback

Dr. Heather Rothenberg   COTM   Heather.Rothenberg2@dot.gov

Ms. Nancy Lefler   TWG-C   nlefler@vhb.com

Mr. Mike Sawyer   TOPI   msawyer@vhb.com

Website: www.safety.fhwa.dot.gov/rsdp

ROADWAY SAFETY
DATA PARTNERSHIP
COLLECTING • ANALYZING • MANAGING • EXPANDING

U.S. Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives